

TRANSLATION

JAPANESE PATENT OFFICE
UNEXAMINED PATENT APPLICATION (A)

5 (11) Unexamined Patent Application No. 2000-204030 (P2000-204030A)

(43) Date of Publication: July 25, 2000

10 Examination not yet requested Number of Claims: 1 (Total 5 pages)

(51) Int. Cl.³ Identification No. FI
A 61 K 7/48 A 61 K 7/48
7/00 7/00

15 (54) Title of the Invention: SKIN CARE COSMETIC MATERIAL

(21) Patent Application No.: H 11-3909

20 (22) Application Date: January 11, 1998

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(54) [Title of the Invention] SKIN CARE COSMETIC MATERIAL

40 (57) [Abstract]

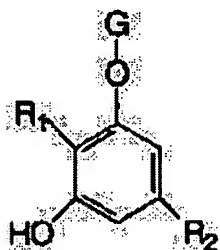
[Task]

A skin care cosmetic material with excellent safety and also skin beautifying effect is presented.

[Solution]

A skin care cosmetic material containing at least one cardol glycoside represented by the general formula (1) or cardanol glycoside represented by the general formula (2).

[Chemical Formula 1]



5

(In the formula R₁ is a hydrogen atom or a methyl group. R₂ and R₃ are straight chain saturated or unsaturated hydrocarbon groups containing fifteen carbon atoms and one to three double bonds when they are unsaturated. In addition, G is a group selected from monosaccharides and oligosaccharides.)

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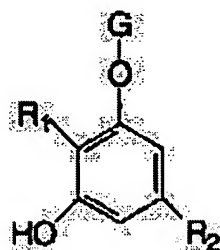
[Scope of the Patent Claims]

[Claim 1]

A skin care cosmetic material containing at least one of cardol glycoside represented by the general formula (1)

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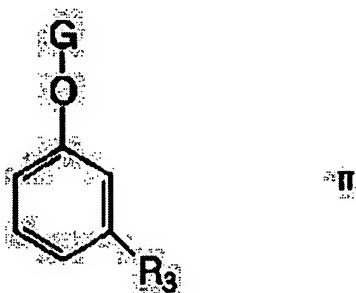
[Chemical Formula 1]



(In the formula R₁ is a hydrogen atom or a methyl group. R₂ is a straight chain saturated or unsaturated hydrocarbon group containing fifteen carbon atoms and one to three double bonds when they are unsaturated. In addition, G is a group selected from monosaccharides and oligosaccharides.) or cardanol glycoside represented by the general formula (2)

20

[Chemical Formula 2]



(In the formula R₃ is a straight chain saturated or unsaturated hydrocarbon group containing fifteen carbon atoms and one to three double bonds when they are unsaturated. In addition, G is a group selected from monosaccharides and oligosaccharides.)

[Detailed Description of the Invention]

[0001]

[Technological Field of the Invention]

10 The present invention deals with a skin care cosmetic material with excellent safety and skin beautifying effect.

[0002]

[Conventional Technology and the Problems for the Invention to Solve]

Cardol and cardanol are phenol lipids present in the oil of cashew nut shell and the like.

15 Cardol and cardanol are already known to have an antioxidation action and whitening action, and they are also used as external agents to treat skin acne. (Unexamined Japanese Patent Application Hei 02-217484, Unexamined Japanese Patent Application Hei 03-240718 and Unexamined Japanese Patent Application Hei 04-89419.) However, cardol and cardanol have a phenol structure and are not sufficiently stable when
20 formulated into a cosmetic material. In addition, cardol and cardanol are known to induce dermatitis when applied to the skin, and their formulations are concerns from the standpoint of safety. (Giant Chemical Dictionary, 2nd edition, Kyoritsu Shuppan K.K.)

[0003]

When a variety of phenol compounds with stability and safety problems up to this point
25 were used as glycosides, the inventors confirmed that their stability and safety improved and the characteristics of the phenol compound that is the aglycone section of the skin were maintained for an extended period. (Unexamined Japanese Patent Applications Hei 07-179328, Hei 09-40531, Hei 09-301990 and Hei 10-25237.)

[0004]

At the same time, not only no report on the presence of the glycosides of cardol and cardanol in nature found but also investigations on their application were completely absent.

5 [0005]

Therefore, the inventors synthesized the glycosides of cardol and cardanol and also conducted an extensive study of their applications. As a result, the inventors confirmed that cardol and cardanol when present in the form of glycosides much safer than cardol and cardanol previously in existence. In addition, the inventors confirmed that a skin care cosmetic material with safety and excellent skin beautifying effect could be obtained by formulating these glycosides. The present invention was completed based on these confirmations.

[0006]

That is, the objective of the present invention is to present a safe skin care cosmetic material with excellent skin beautifying effect.

[0007]

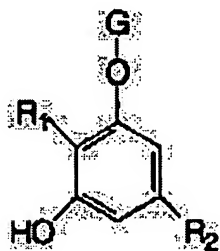
[Means to Solve the Problems]

The objective described above can be achieved by the presence of at least one specific cardol glycoside or cardanol glycoside.

20 [0008]

That is, the present invention is a skin care cosmetic material containing at least one of cardol glycoside represented by the general formula (1)

[Chemical Formula 3]



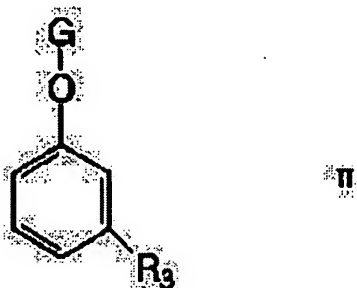
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(In the formula R₁ is a hydrogen atom or a methyl group. R₂ is a straight chain saturated or unsaturated hydrocarbon group containing fifteen carbon atoms and one to three double bonds when they are unsaturated. In addition, G is a group selected from monosaccharides and oligosaccharides.) or

cardanol glycoside represented by the general formula (2)

[0009]

[Chemical Formula 4]



- 5 (In the formula R₃ is a straight chain saturated or unsaturated hydrocarbon group containing fifteen carbon atoms and one to three double bonds when they are unsaturated. In addition, G is a group selected from monosaccharides and oligosaccharides.)

[0010]

10 [Embodiment of the Invention]

The cardol glycoside or cardanol glycoside represented by the general formula (1) above can be obtained using the production method described in Unexamined Japanese Patent Report Hei 07-179328. For example, cardol or cardanol is allowed to condense with an acetylated saccharide in anhydrous toluene using boron trifluoride as the catalyst, and the acetyl group is subsequently released in the presence of an alkali.

15

[0011]

The saccharide radical of the cardol glycoside or cardanol glycoside used in the present invention is a reducing monosaccharide or an oligosaccharide. More specifically, monosaccharides such as glucose, galactose, xylose, mannose, N-acetylglucosamine and the like and disaccharides such as maltose, cellobiose, gentiobiose and the like may be cited. Now isomers containing α -bonds and β -bonds are present for the glycosides of the present invention, but either one or a mixture of both may be used.

20

[0012]

As the glycoside used in the present invention, 3-hydroxy-5-(8,11,14-pentadecatrienyl)-phenyl-D-glucoside (henceforth referred to as Compound 1), 3-hydroxy-5-(8,11-pentadecadienyl)-phenyl-D-galactoside, 3-hydroxy-5-(8-pentadecadecenyl)-phenyl-D-xyloside, 3-hydroxy-5-(8-pentadecadecenyl)-phenyl-D-maltoside, 3-hydroxy-5-(8-pentadecadecenyl)-phenyl-D-mannoside, 2-methyl-3-hydroxy-5-(8,11-pentadecadienyl)-

25

phenyl-D-glucoside (henceforth referred to as Compound 2), 2-methyl-3-hydroxy-5-(8-pentadecadecenyl)-phenyl-D-galactoside, 2-methyl-3-hydroxy-5-pentadecenyl-D-xyloside, 2-methyl-3-hydroxy-5-(8,11-pentadecadienyl)-phenyl-D-maltoside, 3-(8-pentadecadecenyl)-phenyl-D-glucoside, 3-pentadecylphenyl-D-glucoside (henceforth
5 referred to as Compound 3), 3-pentadecylphenyl-D-galactoside, 3-(8,11,14-pentadecatrienyl)-phenyl-D-mannoside and the like may be cited. The ¹³C-NMR spectrum (deuterated chloroform was used as the solvent, TMS was the standard sample, 40°C was the measurement temperature and the number of integration was 1,000) of the 3-pentadecylphenyl-β-D-glucoside (Compound 3) obtained according to the
10 method described above is shown in Figure 1.

[0013]

A skin care cosmetic material of the present invention containing at least one cardol glycoside or cardanol glycoside may be combined in the range that its effect is not adversely affected with various components commonly used in cosmetic material
15 compositions such as oils, surfactants, moisture retention agents, thickeners, preservatives, oxidation inhibitors, ultraviolet ray absorption agents, fragrances, colors and the like when necessary.

[0014]

In the present invention, the skin refers to all skin on the human body surface including
20 scalp, and a dandruff prevention effect and the like due to the prevention of dry skin can be expected when the material of the present invention is used on the scalp.

[0015]

The skin care cosmetic material of the present invention may be used optionally in the form of ointments, lotions, emulsions, creams, masks, granules, base makeup and the
25 like.

[0016]

In addition, the amount of the glycoside described above added to the skin care cosmetic material of the present invention cannot be specified since the amount varies over a broad range depending on the objective and the target, but from 0.0001% by
30 weight to 5.0% by weight is generally preferred.

[0017]

[Examples]

Examples are cited below to explain the present invention in further detail, but the present invention is not restricted by the examples. In addition, the wt.% shown in the examples refers to % by weight.

[0018]

Examples 1-3 and Comparative Examples 1-2 (cream).

Beautifying skin care cosmetic materials comprising the compositions shown in Table 1 below were prepared and were used as samples.

[0019]

[Table 1]

	Amounts added (wt.%)				
	Examples			Comp. Ex.	
Components	1	2	3	1	2
Stearic acid	7.0	7.0	7.0	7.0	7.0
Oleic acid	3.0	3.0	3.0	3.0	3.0
Stearyl alcohol	4.0	4.0	4.0	4.0	4.0
Stearic acid monoglycerin ester	8.0	8.0	8.0	8.0	8.0
Compound 1 of the invention	0.5	—	—	—	—
Compound 2 of the invention	—	0.3	—	—	—
Compound 3 of the invention	—	—	0.1	—	—
5-(8,11,14-pentadecatrienyl) resorcinol	—	—	—	—	0.3
Ethylparaben	0.1	0.1	0.1	0.1	0.1
Butylparaben	0.1	0.1	0.1	0.1	0.1
Propylparaben	0.1	0.1	0.1	0.1	0.1
Propylene glycol	8.0	8.0	8.0	8.0	8.0
Glycerin	2.0	2.0	2.0	2.0	2.0
Potassium hydroxide	0.4	0.4	0.4	0.4	0.4
Sodium edetate	0.05	0.05	0.05	0.05	0.05
Purified water	Balance	Balance	Balance	Balance	Balance

[0020]

Samples, 0.4 g portions, were applied on the cheeks of three panelists twice a day continuously for one week. The items listed in Table 2 were evaluated and the effect was judged.

[0021]

[Table 2]

Performance evaluation			
Irritation		Skin beautifying effect	
Evaluation	Rating	Evaluation	Rating
No irritating feeling at all	O	Skin felt smooth	O
Slightly irritating	Δ	Skin was somewhat smooth	Δ
Felt irritating	X	No change	X

[0022]

- 5 The results of performance evaluation for the materials obtained in Examples 1-3 and Comparative Examples 1-2 were shown in Table 3.

[0023]

[Table 3]

	Panel 1		Panel 2		Panel 3	
	Irritation	Beautification	Irritation	Beautification	Irritation	Beautification
Ex. 1	O	O	O	O	O	O
Ex. 2	O	O	O	O	O	O
Ex.3	O	O	O	O	O	O
Comp. Ex. 1	O	X	O	X	O	x
Comp. Ex. 2	X	O	X	O	Δ	O

10 [0024]

As shown in Table 3, the Examples 1-3 of the present invention exhibited excellent safety and exceptional skin beautifying effect according to the performance evaluation test shown in Table 2.

[0025]

15 Examples 4-5 (essence cosmetic material).

Skin beautifying essence cosmetic materials with the compositions shown in Table 4 below were prepared using an ordinary essence cosmetic material production method, and the materials were tested for continuous use and the performance was evaluated under identical conditions used in Examples 1-3.

[0026]

[Table 4]

Components	Amount added (wt.%)	
	Examples	
	4	5
Ethanol	5.0	5.0
POE (60) hardened castor oil	0.5	0.5
Glycerin	10.0	10.0
Sorbitol	2.0	2.0
Dipropylene glycol	5.0	5.0
Carrageenan	0.3	0.3
Methylparaben	0.1	0.1
Compound 3 of the present invention	0.1	--
Compound 1 of the present invention	0.05	0.3
Fragrance	0.1	0.1
Purified water	Balance	Balance

[0027]

- 5 The materials of the present invention prepared in Examples 4-5 were confirmed to have excellent safety and exceptional skin beautifying effect according to the performance evaluation shown in Table 2.

[0028]

[Effect of the Invention]

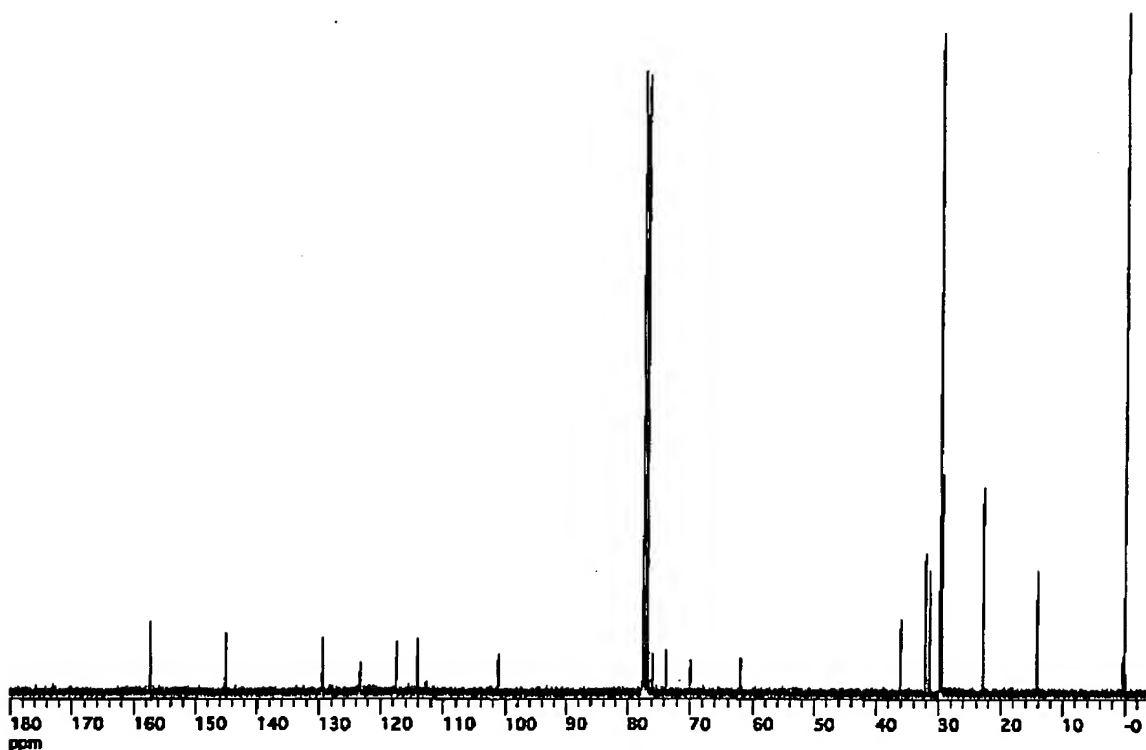
- 10 As described above, the skin care cosmetic material containing a specific glycoside of the present invention clearly did not irritate the skin and had excellent skin beautifying effect.

[Simple Explanation of the Figure]

[Figure 1]

- 15 The figure shows a ^{13}C -NMR spectrum (the solvent used in the measurement: deuterated chloroform, standard sample: TMS, the temperature used in the measurement: 40°C, integration frequency: 1,000) for 3-pentadecylphenyl- β -D-glucoside.

[Figure 1]



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5 F term (reference) 4C032 AB032 AC072 AC102 AC122
 AC132 AC242 AC422 AC432
 AC482 AC532 AD042 AD352
 AD391 AD392 CC02 CC05
 DD31 EE01 EE10 EE12